

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1 – 32 (Cancelled).

33. (Currently Amended) An implant for application in a hole formed in bone comprising: titanium and having one or more surfaces which can be applied in or on tissue areas and/or bone growth areas, one or more of the said surfaces being arranged with a depot for a bone-growth-initiating substance or bone-growth-stimulating substance of the superfamily TGF- β ,

wherein the depot is formed by a pore arrangement in a relatively thick titanium oxide layer on the titanium, and

wherein the titanium oxide layer has a thickness in the range of 1-20 μm , and
wherein the depot comprises a bone-growth-initiating or bone-growth-stimulating substance of the superfamily TGF- β .

34. (Currently Amended) The implant according to claim 33, wherein the titanium oxide layer has a surface roughness in a range of 0.4 - 5 μm .

35. (Currently Amended) The implant according to claim 33, wherein the titanium oxide layer is highly porous, with 1×10^7 - 1×10^{10} pores/cm².

36. (Previously Presented) The implant according to claim 33, wherein each surface essentially has pores with diameter sizes in the range of 0.1 - 10 μm , and/or in that the total pore volume is within a range of 5×10^{-2} and 10^{-5} cm³.

37. (Currently Amended) The implant according to claim 33, wherein the titanium oxide layer has a thickness in the range of 2 - 20 μm .

38. (Currently Amended) The implant according to claim 33, wherein the titanium oxide layer is highly porous, with pore diameters in the range of 0.01 - 10 μm .

39. (Currently Amended) The implant according to claim 33, wherein the titanium oxide layer has a surface roughness of about 1 - 5 μm .

40. (Previously Presented) The implant according to claim 33, wherein the implant is a dental implant.

41. (Currently Amended) The implant according to claim 35, wherein the titanium oxide layer has a surface roughness in a range of 0.4 - 5 μm .

42. (Previously Presented) The implant according to claim 35, wherein each surface essentially has pores with diameter sizes in the range of 0.1 - 10 μm , and/or in that the total pore volume is within a range of 5×10^{-2} and 10^{-5} cm^3 .

43. (Currently Amended) The implant according to claim 35, wherein the titanium oxide layer has a thickness in the range of 2 - 20 μm .

44. (Currently Amended) The implant according to claim 35, wherein the titanium oxide layer is highly porous, with pore diameters in the range of 0.01 - 10 μm .

45. (Currently Amended) The implant according to claim 35, wherein the titanium oxide layer has a surface roughness of about 1 - 5 μm .

46. (Previously Presented) The implant according to claim 35, wherein the implant is a dental implant.